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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,285	10/09/2001	Chia Mu Shao	1221.65863	6372

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EXAMINER
MARKS, CHRISTINA M

ART UNIT	PAPER NUMBER
3713	

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/973,285	SHAO, CHIA MU	
	Examiner	Art Unit	
	C. Marks	3713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,14 and 15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,14 and 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 May 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

The objection to FIG 1, FIG 2, and FIG 3 for not including a legend designating the figures as prior art is hereby withdrawn due to the corrected drawings filed 16 May 2003.

The objection to FIG 1 for not including reference number 42 is hereby withdrawn due to the corrected drawings filed 16 May 2003.

Specification

The objections to the specification for 1) not designation FIG 2 and FIG 3 as prior art, 2) naming FIG 8 as a view of the dartboard, 3) referring to reference 110 which is not present in FIG 4, and 5) not properly referencing FIG 5 have hereby been withdrawn due to the amendment filed 16 May 2003.

Claim Objections

The objection to claim 12 and those dependent therefrom for failing to limit the subject matter of a previous claim is hereby withdrawn due to the cancellation of these claims in the amendment filed 16 May 2003.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3, 5, and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Fuscone (GB 2086243).

Fuscone discloses an electric dart game comprising a dart (FIG 1), a dartboard provided with a frame with a plurality of scoring areas by a plurality of radial and circumferential spiders arranged crossly (FIGS 2, 7, and 9) with a main body for receiving a dart and attached to the frame. Fuscone also discloses an electronic scoring means for displaying signals collected from the scoring areas (FIG 5). The scoring system also uses a plurality of inductance coils (FIG 2, reference 4 and page 1, lines 125-129) connected to the electronic scoring (FIG 5). The dart is also made of thus provided with magnetic substance (page 1, line 75-78 and page 1, line 103). Each of the coils disclosed by Fuscone is associated with a corresponding scoring area and thus defines a scoring signal zone (FIG 2). When the dart is thrown at the board, a scoring signal is generated by the dart entering the signal zone and is transmitted to the scoring means (page 2, lines 20-24 and lines 66-82).

Regarding claim 2, the inductance coils are provided with predetermined shape and are engaged within the scoring areas (FIG 2).

Regarding claim 3, the cross-section of the coils matches and is smaller than the scoring areas (FIG 2).

Regarding claim 5, the frame with the coils is disposed in the back of the main body (Abstract, lines 4-7).

Regarding claim 8, the point of the dart is magnetic substance (page 1, line 104).

Regarding claim 9, the slender shaft is also magnetized (page 1, line 104-106).

Regarding claim 10, the point and slender shaft are integrated and magnetized simultaneously (page 1, lines 104-121).

Regarding claim 11, the main body of the dartboard is made of material used on a traditional dartboard (page 1, lines 41-45). The magnetization of the dart is used for changing the distribution of the magnetic field of the inductance coil (page 2, lines 20-21).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 4, 6, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fuscone (GB 2086243).

What Fuscone discloses has been discussed above and is incorporated herein.

Fuscone discloses that the frame provided with the coils is arranged behind that of the main body. Fuscone does not disclose arranging the frame in front of or within the main body. However, absent a showing of criticality, it would have been obvious to one of ordinary skill in the art to dispose the frame in different locations including within the body, as well as in front of the body in order to either provide easier and quicker mounting of the frame if disposed up front or to manufacture the board with the frame integrated to provide a more sturdy device.

Regarding claims 14 and 15, Fuscone discloses coils with internal cores to measure the inductance of the dartboard. The Applicant states that the invention accomplishes its objective by changing the distribution of the magnetic field of the inductance coil at the moment the dart is received (page 4, lines 8-10). Fuscone discloses this same functionality in the way the objective is accomplished (page 2, lines 20-21). One of ordinary skill in the art understands that there are a plurality of different ways and designs in which inductance can be formed and measured and a

plurality of coil types can be used to accomplish this. This principle is notoriously well known in the art and thus, altering the type of coil used or the material used for the coil would be obvious design alternatives to one of ordinary skill in the art. Therefore, introducing coils in which the darts could penetrate would be apparent over the inductance method disclosed by Fuscone. Further, generating a field when the dart moves through the coil would be inherent to the property of inductance.

Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fuscone (GB 2086243) in view of Clark (US Patent No. 4,768,789).

What Fuscone discloses has been discussed above and is incorporated herein.

Fuscone does not disclose that when a plurality of coils corresponds to different scoring areas representing the same score, they are wired together before being connected to the scoring means.

However, it is a well-known concept in the art that the motherboard required to run the electronic scoring only has a limited number of inputs. Clark further supports this concept. In describing the motherboard used to control the electronic scoring, Clark states that connections must be connected to the same lines in order for the total number of scoring positions on the dartboard to be accounted for (Column 5, lines 26-29). Therefore, it would have been obvious to one of ordinary skill in the art that in order to limit the number of inputs required, inputs having the same signal should be tied together into the same input line in order to conserve the number of inputs needed into the motherboard. One would be motivated to do this in order to limit the cost of electronic components required as well as creating a simpler wiring into the motherboard.

Response to Arguments

Applicant's arguments filed 16 May 2003 have been fully considered but they are not persuasive.

Applicant's argument that Fuscone does not disclose each coil is associated with a corresponding scoring area and that scoring area defines a scoring signal that is transmitted to the scoring means, the Examiner respectfully disagrees. As shown in FIG 2, each coil is associated with a particular scoring area. Fuscone discloses that each of these scoring areas represent a signal zone. As shown in FIG 5, the scoreboard is in communication with the information and from the circuitry involving the coils in the dart board, "set" commands are sent to the electronic scoreboard to transmit scoring information (page 2, lines 66-82).

Further, with respect to claim 1, the argument that Fuscone does not disclose the dart entering the inductance coil is not coterminous with what is being claimed. The feature is; however, discussed above relating to claims 14 and 15.

Applicant's argument that Fuscone neither teaches nor even suggests that the frame provided with the inductance coils can be arranged in front of or within the main body, the Examiner respectfully disagrees. As discussed above, the placement of the frame provided with the inductance coils would be a design choice and choosing the front or within would have been obvious to one of ordinary skill in the art. Without any claimed criticality, an ordinary artisan would find it obvious to allow for the Fuscone board to be adapted in order mounted on the front or within the board. One or ordinary skill in the art would find motivation to mount the board in the front for easier and quicker mounting of the frame, or to manufacture the board with the frame integrated to provide a more sturdy device.

Applicant's arguments that Clark does not teach that a plurality of coils corresponding to different scoring areas representing the same scoring value are wired together, the Examiner respectfully disagrees. The Examiner asserts that Clark teaches the importance of wiring outputs together in a dart game in order to be able to fit all of the dartboard outputs into a single motherboard. This would clearly suggest to one of ordinary skill in the art that the space on the lines must be conserved and thus would motivate this skilled artisan to conserve these spaces by tying common lines together. One of ordinary skill in the art understands that when signals are transmitted, they must be attached to a line in order for their transmission to go through and the data be sent. From the teachings of Clark and this fact alone, it would be obvious to such an artisan to that if different signals were sending identical data that grouping signals that contain the same data together into one line would conserve the number of lines needed as taught by Clark. One of ordinary skill in the art would understand the connections required to accomplish this as well as how to tie the wires together into a single input in order to obtain the objectives as stated by Clark.

Applicant's arguments with respect to claims 14 and 15 fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Marks whose telephone number is (703)-305-7497. The examiner can normally be reached on Monday - Thursday (7:30AM - 5:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael O'Neill, Acting SPE, can be reached on (703)-308-3484. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9302 for regular communications and (703)-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1148.

Cmm

cmm
July 30, 2003

MICHAEL O'NEILL
PRIMARY EXAMINER